

**In the claims:**

118 - 122 (Cancelled)

123. (Currently Amended) A local area network ~~according to claim 122~~, comprising:

a LAN switch;

a plurality of local area network nodes;

a power supply subsystem comprising at least one of a voltage sensor and a current sensor;

a power management and control unit; and

a communication cabling connecting said plurality of local area network nodes to said power supply subsystem and to said LAN switch, said communication cabling providing data communication between said LAN switch and said plurality of local area network nodes;

said power supply subsystem being operative under control of said power management and control unit to:

provide at least some power via the communication cabling to said plurality of local area network nodes;

monitor via said at least one of a voltage sensor and a current sensor at least one of the power consumption of, and the current flow to, each of said plurality of local area network nodes; and

classify, responsive to said monitored at least one of the power consumption and the current flow, each of said plurality of local area network nodes for which said at least some power is provided via the communication cabling as alternatively one of over-current, under current and normal,

wherein in the event said power management and control unit classifies one of said plurality of local area network nodes for which at least some power is provided via the communication cabling as under current, said power management and control unit is further operative to terminate said provided power to said under current one of said plurality of local area network nodes ~~wherein said termination of said provided power is within a predetermined~~

time of said classification of said one of said plurality of local area network nodes as under current.

124. (Currently Amended) A local area network ~~according to claim 118, comprising:~~

a LAN switch;

a plurality of local area network nodes;

a power supply subsystem comprising at least one of a voltage sensor and a current sensor;

a power management and control unit; and

a communication cabling connecting said plurality of nodes to said power supply subsystem and to said LAN switch, said communication cabling providing data communication between said LAN switch and said plurality of local area network nodes;

said power supply subsystem being operative under control of said power management and control unit to:

provide at least some power via the communication cabling to said plurality of local area network nodes;

monitor via said at least one of a voltage sensor and a current sensor at least one of the power consumption of, and the current flow to, each of said plurality of local area network nodes;

classify, responsive to said monitored at least one of the power consumption and the current flow, each of said plurality of local area network nodes for which said at least some power is provided via the communication cabling as alternatively one of over-current, under current and normal; ~~wherein said power management and control unit is further operative to:~~

monitor a total of the current flow to said plurality of local area network nodes provided at least some power via the communication cabling; and

classify said monitored total current flow as being alternatively one of over-current and normal,

wherein said total of the current flow represents the overall current flow to said plurality of local area network nodes.

125. (Previously Presented) A local area network according to claim 124, further comprising a management workstation in communication with said power management and control unit, said power management and control unit being operative to report said over-current or normal classification of said monitored total current flow to said management workstation.

126 – 132. (Cancelled)

133. (Currently Amended) ~~A power supply subsystem according to claim 130, for supplying power to a plurality of local area network nodes over communication cabling, said power supply subsystem comprising:~~

at least one of a voltage sensor and a current sensor; and

a power management and control unit,

said power management and control unit being operative to:

provide at least some power via the communication cabling to the plurality of local area network nodes;

monitor via said one of a voltage sensor and a current sensor at least one of the power consumption of, and the current flow to, each of the plurality of local area network nodes;

classify, responsive to said monitored at least one of the power consumption and the current flow, each of the plurality of local area network nodes for which said at least some power is provided via the communication cabling as alternatively one of over-current, under current and normal;

~~wherein said at least one local area network node comprises a plurality of local area network nodes, and wherein said power management and control unit is further operative to:~~

~~monitor a total of the current flow to said plurality of local area network nodes; and~~

classify said monitored total current flow as being one of over-current and normal,

wherein said total of the current flow represents the overall current flow to said plurality of local area network nodes being provided said at least some power.

134. (Previously Presented) A power supply subsystem according to claim 133, wherein said power management and control unit is further operative to communicate said over-current or normal classification to a management workstation.

135 (Cancelled)

136. (Currently Amended) A power supply subsystem according to claim 133 ~~claim 130~~, wherein said power management and control unit is further operative to interrogate each of said plurality of local area network nodes ~~the at least one network node~~ to determine if the ~~at least one~~ local area network node has characteristics allowing the ~~at least one~~ local area network node to receive power over the communication cabling, and wherein said power management and control unit is further operative to report a status of said interrogation of each of said local area network nodes ~~at least one network node~~ to a management workstation.

137 – 140 (Cancelled)

141. (Currently Amended) A method ~~according to claim 140, further comprising of supplying power to at least one network node over communication cabling, the method comprising:~~

providing power to the at least one network node over the communication cabling;

monitoring at least one of power consumption of, and current flow to, said at least one network node for which said power is provided;

classifying, responsive to said monitoring, the at least one network node for which said power is provided as alternatively one of over-current, under current and normal;  
and

providing a plurality of programmably adjustable thresholds for said over current classification,

wherein said over current classification exhibits a plurality of sub-classification, each of said over current sub-classifications being associated with a particular one of said provided plurality of programmably adjustable thresholds which is exceeded.

142. (Currently Amended) A method according to claim 141, further comprising:

terminating, in the event the at least one network node is classified as over current, said provided power to said over current at least one network node ~~wherein said terminating of said provided power is~~ within a predetermined time of said classification of the at least one network node as over current, and wherein said predetermined time is a function of said particular one of said provided plurality of programmably adjustable thresholds which is exceeded.

143. (Currently Amended) A method according to claim 141 ~~claim 138~~, further comprising:

in the event the at least one network node is classified as under current, terminating said provided power to said under current at least one network node.

144. (Currently Amended) A method ~~according to claim 138, further comprising of supplying power to at least one network node over communication cabling, the method comprising:~~

providing power to the at least one network node over said communication cabling;

monitoring at least one of power consumption of, and current flow to, said at least one network node for which said power is provided;

classifying, responsive to said monitoring, the at least one network node for which said power is provided as alternatively one of over-current, under current and normal;  
and

in the event the at least one network node is classified as under current, terminating said provided power to said under current at least one network node within a predetermined time of said classification of said at least one network node as under current.

145. (Currently Amended) A method ~~according to claim 138, wherein the at least one network node comprises a plurality of network nodes, the method further comprising~~ of supplying power to a plurality of network nodes over communication cabling, the method comprising:

providing power to a plurality of network nodes over the communication cabling;

monitoring at least one of power consumption of, and current flow to, each of said plurality of network nodes for which said power is provided;

classifying, responsive to said monitoring, each of said plurality of network nodes for which said power is provided as alternatively one of over-current, under current and normal; ~~the method further comprising:~~

monitoring a total of the current flow to said plurality of network nodes;  
and

classifying said monitored total current flow as being alternatively one of over-current and normal,

wherein said total current flow represents the overall current flow to said plurality of network nodes.

146. (Previously Presented) A method according to claim 145, further comprising:

reporting said classification of said total current flow to a management workstation.

147. (Previously Presented) A method according to claim 145, further comprising:

providing a plurality of programmably adjustable thresholds for said total current flow over current classification,

wherein said total current flow over current classification exhibits a plurality of sub-classification, each of said total current flow over current sub-classifications being associated with a particular one of said provided plurality of programmably adjustable thresholds which is exceeded.

148. (Currently Amended) A local area network according to ~~claim 118~~ claim 123, wherein in the event said power management and control unit classifies one of said plurality of local area network nodes for which at least some power is provided via the communication cabling as over current, said power management and control unit is further operative to terminate said provided power to said over current one of said plurality of local area network nodes.

149. (Currently Amended) A local area network ~~according to claim 148~~, comprising:

a LAN switch;

a plurality of local area network nodes;

a power supply subsystem comprising at least one of a voltage sensor and a current sensor;

a power management and control unit; and

a communication cabling connecting said plurality of nodes to said power supply subsystem and to said LAN switch, said communication cabling providing data communication between said LAN switch and said plurality of local area network nodes;

said power supply subsystem being operative under control of said power management and control unit to:

provide at least some power via the communication cabling to said plurality of local area network nodes;

monitor via said at least one of a voltage sensor and a current sensor at least one of the power consumption of, and the current flow to, each of said plurality of local area network nodes; and

classify, responsive to said monitored at least one of the power consumption and the current flow, each of said plurality of local area network nodes for which said at least some power is provided via the communication cabling as alternatively one of over-current, under current and normal,

wherein said over current classification exhibits a plurality of sub-classifications, each of said over current sub-classification being associated with a particular one of a plurality of programmably adjustable thresholds which is exceeded.

150. (Currently Amended) A local area network according to claim 149, wherein in the event said power management and control unit classifies one of said plurality of local area network nodes for which at least some power is provided via the communication cabling as over current, said power management and control unit is further operative to terminate said provided power to said over current one of said plurality of local area network nodes ~~wherein said termination of said provided power is~~ within a predetermined time of said classification of said one of said plurality of local area network nodes as over current, and wherein said predetermined time is a function of said particular one of said plurality of programmably adjustable thresholds which is exceeded.

151. (Previously Presented) A local area network according to claim 124, wherein said over current classification of said monitored total current flow exhibits a plurality of sub-classifications, each of said over current sub-classifications of said monitored total current flow being associated with a particular one of a plurality of programmably adjustable thresholds which is exceeded.

152. (Currently Amended) A power supply subsystem according to claim 155 ~~claim 130~~, wherein in the event said power management and control unit classifies one of the at least one local area network nodes for which at least some power is provided via the communication cabling as under current, said power management and control unit is further operative to terminate said provided power to said under current at least one local area network node.



153. (Currently Amended) A power supply subsystem ~~according to claim 152,~~ for supplying power to at least one local area network node over communication cabling, said power supply subsystem comprising:

at least one of a voltage sensor and a current sensor; and

a power management and control unit,

said power management and control unit being operative to:

provide at least some power via the communication cabling to the at least one local area network node;

monitor via said one of a voltage sensor and a current sensor at least one of the power consumption of, and the current flow to, the at least one local area network node;  
and

classify, responsive to said monitored at least one of the power consumption and the current flow, the at least one network node for which said at least some power is provided via the communication cabling as alternatively one of over-current, under current and normal,

wherein in the event said power management and control unit classifies one of the at least one local area network nodes for which at least some power is provided via the communication cabling as under current, said power management and control unit is further operative to terminate said provided power to said under current at least one local area network wherein said termination of said provided power is within a predetermined time of said classification of said at least one local area network node as under current.

154. (Currently Amended) A power supply subsystem according to claim 153 ~~claim 130~~, wherein in the event said power management and control unit classifies one of the at least one network node for which at least some power is provided via the communication cabling as over current, said power management and control unit is further operative to terminate said provided power to said over current at least one network node.

155. (Currently Amended) A power supply subsystem ~~according to claim 154,~~ for supplying power to at least one local area network node over communication cabling, said power supply subsystem comprising:

at least one of a voltage sensor and a current sensor; and

a power management and control unit,

said power management and control unit being operative to:

provide at least some power via the communication cabling to the at least one local area network node;

monitor via said one of a voltage sensor and a current sensor at least one of the power consumption of, and the current flow to, the at least one local area network node;  
and

classify, responsive to said monitored at least one of the power consumption and the current flow, the at least one local area network node for which said at least some power is provided via the communication cabling as alternatively one of over-current, under current and normal,

wherein in the event said power management and control unit classifies the at least one local area network node for which at least some power is provided via the communication cabling as over current, said power management and control unit is further operative to terminate said provided power to said over current at least one network node, and

wherein said over current classification exhibits a plurality of sub-classifications, each of said over current sub-classification being associated with a particular one of a plurality of programmably adjustable thresholds which is exceeded.

156. (Previously Presented) A power supply subsystem according to claim 155, wherein said termination of said provided power is within a predetermined time of said classification of said one of said plurality of local area network nodes as over current, and wherein said predetermined time is a function of said particular one of said plurality of programmably adjustable thresholds which is exceeded.

157. (Previously Presented) A power supply subsystem according to claim 133, wherein said over current classification of said monitored total current flow exhibits a plurality of sub-classifications, each of said over current sub-classifications of said monitored total current flow being associated with a particular one of a plurality of programmably adjustable thresholds which is exceeded.